We claim

1. A novel dehairing and fibre opening process for complete elimination of lime and sodium sulfide suitable for all kind of raw materials, comprising:

   i. adding water and proteolytic enzyme, exhibiting activity at experimental pH and experimental temperature, optionally in the presence of silicate salt, to prepare a paste,

   ii. applying the paste, as formed in step (i), on the flesh or grain side of the hides/skins by known method,

   iii. piling the pasted hides/skins, grain to grain, for a period of not less than 12 hours followed by removing the hair by known method to get dehaired hides/skins,

   iv. treating the dehaired hides/skins, as obtained in step (iii), with silicate salt in presence of water, preferably under stirring condition, for a period of not less than 3 hrs, followed by fleshing by known method to get pelt for subsequent post fibre opening processes.

2. A process as claimed in claims 1, wherein the raw materials are selected from the group comprising of skins and hides of goat, sheep, cow and buffalo.

3. A process as claimed in claims 1, wherein addition of the water in step (i) is in the range of 5-10% w/w, with respect to weight of soaked hides/ skin.

4. A process as claimed in claims 1, wherein addition of the proteolytic enzyme in step (i) is in the range of 0.5-1.5% w/w, with respect to weight of soaked hides/ skin.

5. A process as claimed in claims 1, wherein addition of the silicate salt in step (i) is in the range of 0-1.5%, with respect to weight of soaked hides/ skin.

6. A process as claimed in claim 1, wherein in step (i) the experimental pH varies in the range of 7.5-11.0.

7. A process as claimed in claim 1, wherein in step (i) the experimental temperature varies in the range of 25-40°C.

8. A process as claimed in claim 1, wherein addition of silicate salt in step (iv) is in the range of 5-10% w/w, with respect to the weight of soaked hides/ skin.

9. A process as claimed in claim 1, wherein addition of water in step (iv) is in the range of 50-250% w/w, with respect to the weight of soaked hides/ skin.

10. A process as claimed in claim 1, wherein the known methods are manual and mechanical (machine).

11. A process as claimed in claim 1, wherein the proteolytic enzyme used is selected from the group consisting of bacterial protease, fungal protease, either individually or in any combination.

12. A process as claimed in claim 1, wherein the silicate salt used is selected from the group consisting of sodium metasilicate, water glass, sodium orthosilicate, either individually or in combination.

13. A process as claimed in claim 1, wherein the process eliminates the formation of dry sludge in the effluent.

14. A process as claimed in claim 1, wherein time required to complete the process of dehairing and fibre opening is 1 to 3 days as compared to 3 to 5 days used in conventional lime-sodium sulphide process.

15. A process as claimed in claim 1, wherein total solids load is in the range of 50 to 120 kg/t of raw skins/hides as compared to 100 to 200 kg/t of raw skins/ hides in the conventional lime-sodium sulphide process.

16. A process as claimed in claim 1, wherein total chemical oxygen demand load is in the range of 20 to 60 kg/t of raw skins/ hides as compared to 40 to 100 kg/t of raw skins/ hides in the conventional lime-sodium sulphide process.

17. A process as claimed in claim 1, wherein the water required in the process is in the range of 2 to 3 l/kg of raw skins/ hides as compared to 4 to 8 l/kg of raw skins/ hides.

18. A process as claimed in claim 1, wherein the power requirement in the process is in the range of 15 to 45 kWh as compared to 50 to 100 kWh in the conventional lime-sodium sulphide process.

19. A process as claimed in claims 1, wherein the process results in significant reduction in total solids and chemical oxygen demand in comparison to effluent derived from conventional dehairing processes.

20. A process as claimed in claims 1, wherein the process produces soft and supple leather.